

Work Order ID 152406

Monday, October 24, 2016 11:40:30 AM

152406

Page 1

Item ID: D3049-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bearpaw

Start Date: 10/7/2016 Start Qty: 8.00

8

Cust Item ID:

Required Date: 10/24/2016 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan: **DAS 21**

Date:

OCT 24 2016

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3049

Rev B

110

0.00

110

Waterjet

Memo

0.67

FLOW CNC Waterjet

CUT BLANK AS PER FILE D3049-1_BLANK

8**10/16/10/28**

120

0.00

120

HAAS 1

HAAS CNC VERTICAL MACHINING #1

Memo

1.03

HAAS CNC vertical machine #1

1-Inspect material for defects or damage prior to machining
2-Machine as per Folio FA165 and Dwg D3049Identify as D3049-1
3-Deburr

8**φ****DAS 49**
9-89**10/10/10**

130

QC2- Inspect parts off machine FAI/FAIB

0.00

130

QC

Memo

0.01

Quality Control

8**φ****DAS 49**
9-89**10/11/11**

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

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Page 2

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Start Date: 10/7/2016 Start Qty: 8.00

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Cust Item ID:

Required Date: 10/24/2016 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	QC8- Inspect parts - second check	0.00							
140						8	4		DAS 45 10-11-13 9-89
QC	Memo	0.03							
Quality Control									
170	Identify as per dwg & Stock Location: <u>SD</u>	0.00							
170	Packaging					8		NOV 14 2016	DAS 6 9-89
Packaging	Memo	0.01							
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
180								NOV 14 2016	DAS 21 9-89
QC	Memo	0.13							
Quality Control									

DAS
21
9-89 NOV 14 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐				
Misidentified ☐	☐	Past Due ☐	☐				
OTHER :							

Picklist Print

Monday, October 24, 2016 11:40:29 AM

Page 1

Work Order ID: 152406

152406

Parent Item: D3049-1

D3049-1

Parent Item Name: Bearpaw

Start Date: 10/7/2016

Required Date: 10/24/2016

Start Qty: 8.00

Required Qty: 8.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased				120	sf	454.0000	3.4	27.2			

MUHMWB10

UHMW 1" Black - 48"x120" Tivar Mfg.#52480104

Oct 16/10/28

Location

Loc Qty

Loc Code

MAT

40

m135497

40

MAT018

414

m135013

14

m135913

400

30

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

DART AEROSPACE LTD		Work Order:	152 Y06
Description: Bearpaw		Part Number:	D3049-1
Inspection Dwg: D3049	Rev: B	Page 1 of 1	

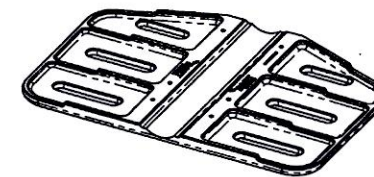
INSPECTION SHEET

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A Ø0.260	+0.005/-0.000	0.260			vern	mm L-05
B 0.93	+/-0.030	0.930				
C 0.40	+0.030/-0.000	0.420			↓	
D 2.00	+/-0.030	2.00				
E 10.31	+/-0.010	10.31			vern 12"	calc-02
F 2.87	+/-0.030	2.86			vern	mm L-05
G 8.00	+/-0.030	8.00			vern 12"	calc-02
H 0.38	+/-0.030	0.385			vern	mm L-05
I 11.50	+/-0.030	11.500			tape	
J 0.07 x 45°	+0.030/-0.010	0.060 x 45°			vern	mm L-05
K 0.44 - 0.47	+/-0.000	0.453			RG	
L R0.25	+/-0.030	0.250			"	
M						
N 0.95	+0.030/-0.010	0.952			vern	mm L-05
O 0.69	+/-0.030	0.695			"	
P 0.20	+/-0.030	0.195			"	
Q R0.25	+/-0.030	0.25			RG	
R 0.25 x 45°	+/-0.030	0.25 x 45°			vern	mm L-05
S						
T						
U						
V						
W						
X						
Y						
Z						
AA						
AB						

Measured by:	Checked by:	QC Inspector:
Date: 16/11/11	Date:	Date:

Engineering Approval: (If necessary)	Date:
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Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue	KJ/RF	
B	08.05.06	Dimension I revised	KJ/DD	
C	16.10.20	Dwg Rev updated	KJ	



16-10-24



- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL, 1.00 THICK MACHINED TO 0.95
(REF DART SPEC. MUHMWB10)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE DART LOGO, PART NUMBER "D3049-1" AND BATCH NUMBER "BXXXXX" IN
ACCORDANCE WITH QSI 044 METHOD 6.3 TO MAX DEPTH OF 0.012 AS ILLUSTRATED
- 7) WEIGHT: 5.94 lbs
- 8) NON DIMENSIONED FEATURES PER CAD FILE "D3049-1-REV.B.STP"

RELEASED
2016-07-26
ECN 16-591

APPROVED

B	REVISE DWG TO CURRENT STANDARDS, ADDED 2 ADDITIONAL CBORE HOLES IN ZN C&E, UPDATE DIM'S DUE TO CAD ERROR; Ø0.93 WAS Ø0.75	ML	16.06.01
A	NEW ISSUE	RF	01.10.18
REV.	DESCRIPTION	BY	DATE
DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ML		
CHECKED	DB	DRAWING NO.	REV. B
MFG. APPR.	JLM	D3049	SHEET 1 OF 1
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	BEARPAW	NTS
DATE	16.06.01	COPYRIGHT © 2001 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE USA, INC.	